CASE STUDY

Basal Cell Adenoma in Maxillary Sinus: Unusual Presentation☆

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Abstract We report a case of basal cell adenoma of a minor salivary gland in the maxillary sinus, an extremely infrequent location. We have not found similar previous cases reported. © 2010 Elsevier España, S.L. All rights reserved.

Tumor de células basales en seno maxilar: presentación inusual

Resumen Presentamos un caso de tumor de células basales de glándula salival menor localizado en el seno maxilar, localización extraordinariamente infrecuente. No se han hallado casos previos en la literatura médica inglesa ni española. © 2010 Elsevier España, S.L. Todos los derechos reservados.

Introduction

Basal cell adenoma is a rare entity belonging to group of basaloïd tumours.1

It appears as a mass of very slow, progressive growth1,2 whose most common location is the parotid gland, although it can develop in any salivary gland.2,3 Due to the difficulty in differentiating it from other basaloïd tumour subtypes of malignant nature, it requires a wide surgical resection and close clinical monitoring.4

We report the case of a patient with basal cell tumour of minor salivary glands located in the maxillary sinus, without evidence of other previously published cases.5

Clinical Case

The patient was a 52-year-old male who attended consultation due to a left nasal obstruction and painless swelling of soft tissues in the left malar region with an evolution of 6 months.

Physical examination found a deformity of the nasal ala and the left side of the superior maxilla, with bulging of the lateral wall of the left nasal fossa that affected permeability. Nasal endoscopy showed a convexity of the lateral wall of the left nasal fossa, decreasing its lumen, with integrity of the mucosal epithelium. We performed middle meatotomy, taking biopsies of the left maxillary sinus. The anatomo-pathological examination observed rounded cells but was unable to obtain conclusive results by haematoxylin–eosin staining. Computed tomography (CT) of the sinuses revealed a complete occupation of the left maxillary sinus, with thickening of adjacent soft tissues, involvement of the anterior wall of the maxillary sinus and medial displacement of the inner wall (Fig. 1).

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We performed a left paralateronasal rhinotomy with drainage of the occupied sinus, obtaining a bone fragment from the anterior wall of the sinus and a set of soft, whitish tissue fragments with nodular appearance, as well as haemorrhagic areas. The subsequent anatomopathological examination revealed a malignant neoplasm with expansive growth, no convincing evidence of invasive foci and a proliferation index close to zero. It was identified as a subepithelial lesion with a basaloid pattern in both haematoxylin–eosin and immunohistochemistry staining. Both techniques were positive for the detection of p63 (basal cell), actin (myoepithelial cells), PanK (keratin in epithelial cells) and CK7 (a mucosal marker with location in the nasal fossae, among others) markers, as well as for

Figure 1  CT of sinuses: (A) coronal and (B) sagittal. Occupation of the left maxillary sinus with involvement of surrounding soft tissues.

Figure 2  Pathological anatomy. Top left; Subepithelial lesion. Haematoxylin–eosin staining, 10×. Top right; Basaloid pattern of round cells. Haematoxylin–eosin staining, 40×. Bottom left; Basaloid pattern. Immunohistochemical staining for detection of p63 (basal cells), 40×. Bottom right; Basaloid pattern. Immunohistochemical staining for detection of CK7 (epithelial marker of nasal mucosa, among other locations), 40×.
changes in bone remodelling without neoplastic infiltration. In light of all this evidence, the definitive diagnosis was of basal cell adenoma (Fig. 2).

We have carried out a regular monitoring of the case every 6 months through physical examination and sinus CT, with no recurrence to date.

Discussion

Up to 88% of salivary gland tumours are of epithelial origin, of which adenomas represent 65.5% of cases. Basal cell adenoma accounts for approximately 1%–2% of epithelial tumours in salivary glands. Over 80% of cases appear in major salivary glands, mainly in the parotid. Development in any minor salivary gland is less frequent and typically occurs in the labial mucosa. It is more common in women aged between 50 and 60 years. It appears as a palpable and painless mass, not adhered to deep planes and with a slow, progressive growth.

The imaging technique of choice is contrast-enhanced CT, where its images appear as rounded and circumscribed, with heterogeneous uptake in their interior. The definitive diagnosis is histological. These tumours consist of 2 types of cells: small round or ovoid cells with scant cytoplasm and a dark nucleus, and polygonal cells with eosinophilic cytoplasm and pale basophilic nuclei. In their central part they are arranged into cell nests joined together by a collagen stroma, while in the periphery they adopt a fence arrangement, in a differentiated structure resembling a basal membrane without chondroid tissue or myxoid stroma. Their myoepithelial nature is characteristic, with coexpression of cytokeratin and actin. Histological differential diagnosis with other types of basaloid tumours is complex. It is distinguished from pleomorphic adenoma by its lack of chondroid tissue and myxoid stroma. It is also important to distinguish it from basal cell adenocarcinoma, which presents an infiltration pattern of adjacent tissues, including nerve and vascular structures, and has a high degree of cellular atypia and mitosis. Treatment consists of surgical resection of the lesion and subsequent clinical follow-up, given the difficulty of performing a differential diagnosis with other malignant subtypes. An endoscopic approach should be employed whenever possible. However, cases with involvement of the sinus walls and/or adjacent soft tissues, such as the present one, require an external approach.

Conflict of Interests

The authors have no conflicts of interest to declare.

References